

## ABSTRACT OF THE DISCLOSURE

A thin film formation apparatus for forming a thin film on a substrate is provided, which comprises: a reaction chamber; a gas introduction section for introducing a reactant gas into the  
5 reaction chamber; an evacuation section for exhausting the reactant gas from the reaction chamber; first and second planar electrodes provided in the reaction chamber; first and second support members which respectively support the first and second electrodes in parallel relation; a high frequency power source for  
10 applying high frequency power between the first and second electrodes; and a heating section for heating one of the first and second electrodes; wherein the substrate is placed on the heated electrode, and at least one of the first and second electrodes is supported movably in the direction of thermal expansion by the  
15 corresponding support member. With this arrangement, the variation in the spacing between the first electrode (anode electrode) and the second electrode (cathode electrode) can be reduced when the first and second electrodes are heated.